

IN THE CLAIMS

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Please cancel Claims 1-3, and add new claims 4-46, as follows:

- 2 4. An apparatus for transmitting message signals in a
communications system having new calls entering the
communications system and spreading codes assigned to the
4 new calls, comprising:
(a) means for dividing the spreading codes into bins according
6 to indices of the spreading codes;
(b) means for determining a number of active spreading codes
8 in the bins;
(c) means for selecting a spreading code in accordance with
10 the determination of step (b); and
(d) means for assigning the selected spreading code to the
12 new call.
- 2 5. The transmission apparatus of claim 4, wherein the spreading
codes are divided into cycles according to the indices.
- 2 6. The transmission apparatus of claim 4, wherein the number of
bins is n and the spreading codes are divided into bins in
accordance with the value of their indices modulo n .
- 2 7. The transmission apparatus of claim 4, further comprising
means for determining a minimum number of active spreading
codes in the bins.
- 2 8. The transmission apparatus of claim 7, further comprising the
means for selecting the spreading code in accordance with the
minimum number of active spreading codes.

9. The transmission apparatus of claim 8, wherein a plurality of the
bins contain the minimum number of active spreading codes,
further comprising:

means for selecting a bin the plurality of bins
containing the minimum number of active spreading
codes; and
means for selecting a spreading code from the
selected bin.

10. The transmission apparatus of claim 9, further comprising:

means for determining a subset of the bins containing the
minimum number of active spreading codes; and
means for selecting a first predetermined bin with a
preference lower than a preference for the remaining bins
of the subset of the bins.

11. The transmission apparatus of claim 10, wherein the first
predetermined bin comprises a pilot signal bin.

12. The transmission apparatus of claim 10, further comprising means
for selecting a second predetermined bin with a preference
greater than the preference of the first predetermined bin and a
preference less than the preference of the remaining bins of the
subset of the bins.

13. The transmission apparatus of claim 10, further comprising means
for selecting a bin of the subset of remaining bins with equal
preference.

14. The transmission apparatus of claim 5, including a current cycle
wherein the means for selecting a spreading code comprises
means for selecting a spreading code within the current cycle.

2 15. The transmission apparatus of claim 14, further comprising means for selecting a spreading code in a differing cycle only when no spreading codes are available in the current cycle.

2 16. A computer readable medium embodying a method for transmitting message signals in a communications system having new calls entering the communications system and spreading codes assigned to the new calls, the method comprising of the steps of:

6 (a) dividing the spreading codes into bins;

8 (b) determining a number of active spreading codes in the bins;

10 (c) selecting a spreading code in accordance with the determination of step (b); and

(d) assigning the selected spreading code to the new call.

2 17. The computer readable medium of claim 16, wherein the spreading codes have indices and step (a) comprises dividing the spreading codes according to the indices.

2 18. The computer readable medium of claim 17, wherein the spreading codes are divided into cycles according to the indices.

2 19. The computer readable medium of claim 17, wherein the number of bins is n and the spreading codes are divided into bins in accordance with the value of their indices modulo n .

2 20. The computer readable medium of claim 16, the method further comprising the step of determining a minimum number of active spreading codes in the bins.

21. The computer readable medium of claim 20, the method further comprising the step of selecting the spreading code in accordance with the minimum number of active spreading codes.

22. The computer readable medium of claim 21, wherein a plurality of the bins contain the minimum number of active spreading codes, comprising the step of:

selecting a bin from the plurality of bins containing the minimum number of active spreading codes; and
selecting a spreading code from the selected bin.

23. The computer readable medium of claim 22, the method further comprising the steps of:

determining a subset of the bins containing the minimum number of active spreading codes; and
selecting a first predetermined bin with a preference lower than a preference for the remaining bins of the subset of the bins.

24. The computer readable medium of claim 23, wherein the first predetermined bin comprises a pilot signal bin.

25. The computer readable medium of claim 23, the method further comprising the step of selecting a second predetermined bin with a preference greater than the preference of the first predetermined bin and a preference less than the preference of the remaining bins of the subset of the bins.

26. The computer readable medium of claim 23, the method further comprising the step of selecting a bin of the subset of remaining bins with equal preference.

- 2 27. The computer readable medium of claim 18, including a current cycle wherein the step of selecting a spreading code comprises selecting a spreading code within the current cycle.
- 2 28. The computer readable medium of claim 27, the method further comprising the step of selecting a spreading code in a differing cycle only when no spreading codes are available in the current cycle.
- 4 29. An apparatus for transmitting message signals in a communications system having new calls entering the communications system and spreading codes assigned to the new calls, comprising:
- 2 (a) means for dividing the spreading codes into bins;
- 4 (b) means for determining traffic channel gains of active spreading codes in the bins;
- 6 (c) means for selecting a spreading code in accordance with the determination of step (b); and
- 8 (d) means for assigning the selected spreading code to the new call.
- 10 30. The transmission apparatus of claim 29, wherein the spreading codes are divided according to the indices.
- 2 31. The transmission apparatus of claim 30, wherein the spreading codes are divided into cycles according to the indices.
- 2 32. The transmission apparatus of claim 29, wherein the number of bins is n and the spreading codes are divided into bins in accordance with the value of their indices modulo n .
- 2 33. The transmission apparatus of claim 29, further comprising means for updating the bins using the traffic channel gains of the active spreading codes in the bins.

2 34. The transmission apparatus of claim 33, wherein the updating is periodic.

2 35. A method for transmitting message signals in a communications system having new calls entering the communications system and spreading codes assigned to the new calls, comprising:

- 4 (a) dividing the spreading codes into bins;
- 6 (b) determining traffic channel gains of active spreading codes in the bins;
- 8 (c) selecting a spreading code in accordance with the determination of step (b); and
- (d) assigning the selected spreading code to the new call.

2 36. The transmission method of claim 35, wherein the spreading codes are divided into cycles according to the indices.

2 37. The transmission method of claim 36, wherein the spreading codes are divided into cycles according to the indices.

2 38. The transmission method of claim 35, wherein the number of bins is n and the spreading codes are divided into bins in accordance with the value of their indices modulo n .

2 39. The transmission method of claim 35, further comprising updating the bins using the traffic channel gains of the active spreading codes in the bins.

2 40. The transmission method of claim 39, wherein the updating is periodic.

2 41. A computer readable medium embodying a method for transmitting message signals in a communications system having new calls entering the communications system and spreading codes assigned to the new calls, the method comprising:

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- 6 (a) dividing the spreading codes into bins;
6 (b) determining traffic channel gains of active spreading codes
in the bins;
8 (c) selecting a spreading code in accordance with the
determination of step (b); and
10 (d) assigning the selected spreading code to the new call.

2 42. The computer readable medium of claim 41, wherein the
spreading codes are divided into cycles according to the indices.

2 43. The computer readable medium of claim 42, wherein the
spreading codes are divided into cycles according to the indices.

2 44. The computer readable medium of claim 41, wherein the number
of bins is n and the spreading codes are divided into bins in
accordance with the value of their indices modulo n .

2 45. The computer readable medium of claim 41, further comprising
updating the bins using the traffic channel gains of the active
spreading codes in the bins.

2 46. The computer readable medium of claim 45, wherein the updating
is periodic.
